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Newsletter - June 9th, 2010

Demystify ICAO Format Flight Plans

On June 29, 2008 the FAA started requiring ICAO Format flight plans on all flights filing RNAV departures/arrivals, "Q" Routes, or "T" Routes. The 2nd anniversary of this requirement is this month, yet here at FltPlan.com we still see many questions about equipment suffixes and wake turbulence categories.

Here's what you need to know

- a.) An ICAO Format flight plan has nothing to do with flying an international flight. You can (and should) use an ICAO Format flight plan even when flying from KLUK (Cincinnati OH) to KMEM (Memphis TN).
- b.) An ICAO Format flight plan is only a different format (versus using a Domestic Format flight plan). The ICAO Format is just a different form for entering flight data being supplied to the FAA when filing a flight plan.
- c.) The letter after your aircraft type on an ICAO Format flight plan is your Wake Turbulence Category.

Why did the FAA switch to ICAO Format for RNAV flights?

The ICAO Format allows a greater amount of data to be entered into a submitted flight plan, so your aircraft and its capabilities can be properly entered into the ATC system for routing purposes.

Why does the FAA need info on my aircraft that wasn't available on the Domestic Format?

With the Domestic Format, the flight plan is limited to 26 letters for showing equipment capabilities (i.e. /A, /L, /Q, etc.). On the Domestic Format flight plan, the equipment capabilities are added to the end of your aircraft type, and it looked like **H25B/Q** or **C172/A**.

The problem with the Domestic Format was that, with all the combinations of equipment (RNP, RNAV, GPS, FMS, RVSM, LORAN, DME, TACAN), plus transponder (Mode C, S etc), the FAA quickly ran out of letters.

For practical considerations, the FAA decided to use the already established and tested ICAO Format (which in the past was primarily used for international flight plans, thus the ICAO name), instead of creating a whole new format for pilots to submit their expanded equipment information.

With the ICAO format, each type of equipment gets its own letter (for example, **D**=DME, **G**= GPS, **W**=RVSM). You put these letters together (**DGHLORVWXYZ**) in the Equipment section (Item 10) of your ICAO Format flight plan, and the FAA computers can easily decipher what equipment and capabilities you have from the submitted flight plan. At the end of the equipment list, on the ICAO format, you have a / (slash) and a letter. This is your transponder information. The transponder info gets added to the above letters and you end up with **DGHLORVWXYZ/S**.

Additional Navigational (**NAV**) capabilities are listed in ITEM 18 (e.g. **NAV/RNVD1A1E2 RNP4**) for RNAV (**RNV**) Departures (**D1**) and RNAV Arrivals (**A1**), and Enroute "Q" and "T" Routes (**E2**), and RNP certification level (**RNP4**). The numbers in **D1**, **A1**, **E2** and **RNP4** all represent RNAV accuracy in

nautical miles (i.e. 1 = 1nm, 4 = 4 nm).

Now that you know why, how do you make it all work for you using FltPlan.com?

Enter the data.

FltPlan.com provides a simple-to-use screen for entering your data suitable to an ICAO Format flight plan. (This is accessed from the **A/C ICAO Data** section on the left side of the Main Menu page.)

Select ICAO Format when creating a flight plans.

Actually, when creating a new flight plan, we default your flight plan to ICAO Format.

If you are flying a Jet or Turboprop aircraft and you choose Domestic format, we'll give you a friendly reminder to use ICAO Format.

Know what all the letters mean.

On the top of the NavLog, we will give you the equipment letters being sent to the FAA in your flight plan.

Navigation Log		FltPlan.com	
N1234A	IFR GenAv	CL60/M	Equip: SDHRWZ/P
Dep: KMMU	1300Z	455kts	FL360 Filed Route (see below)
Dest: KPDK	ETE: 1:47	Altn: KRYY	
item 18: NAV/RNVD1A1E2 RNP4			
item 19: FOB: 0415 SOB: 4 PIC:BOB ALLEN			
LANNA J48 ODF.AWSON1			

Fig.1 - ICAO NavLog for a Challenger.


Navigation Log		FltPlan.com	
N3456C	IFR GenAv	PA32/L	Equip: SDGZ/
Dep: KFPR	1900Z	143kts	7,000 Filed Route (see b
Dest: MYNN	ETE: 1:46	Altn:	
item 18: NAV/RNVE99 RMK/PTP			
item 19: FOB: 0300 SOB: 3 PIC:BOB ALLEN			
BERTH BR62V ZFP BR65V ZQA			

Fig.2 - ICAO NavLog for a Piper Saratoga.

If you don't know what all the letters mean, on the bottom of the NavLog is a button label **ICAO FP Listing**.

Block time: Flight time: Fuel Used:

GPS RAIM TRIP NOTES: LIMO arranged for 9:15am Pickup - 1800.555.1212

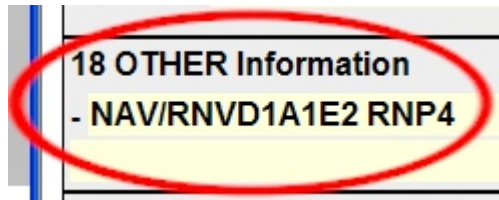
Winds Aloft Matrix **ICAO FP Listing** TOLD Card  Email this

If you click on this button, you will get a copy of the ICAO Format flight plan, and we will also give you what each letter means.

9 NUMBER	TYPE OF AIRCRAFT	WAKE TURBULENCE CAT.
- 1 (aircraft)	C650	/ M (Medium)

D=DME G=GPS H=HF L=ILS O=VOR R=RNP V=VHF W=RVSM X=MNPS Y=CMNPS Z=RNAV info in item 18 /P=Xpdr - Alt. / No I

43 DEPARTURE AERODROME TIME



Just to make it interesting (some may say confusing).

On the Domestic Format flight plan, (as noted earlier), the equipment suffix was added to the end of your aircraft type: **C650/L** (aka a Citation 650 with GPS and RVSM capable) or **PA44/A** (aka a Piper Seminole with DME and Mode C Transponder).

On an ICAO Format Flight plan, these same aircraft would be **C650/M** (a Citation 650 that has a Medium Wake Turbulence Category) and **PA44/L** (a Piper Seminole with a Light Wake Turbulence Category). The reason is that in an ICAO format flight plan, the wake turbulence category appears directly after the aircraft type (and not the equipment type).

Wake turbulence categories are as follows:

- "H" for Heavy - Greater than 300,000 lbs. maximum certificated take-off weight
- "M" for Medium - Between 15,000 and 300,000 lbs. maximum certificated take-off weight
- "L" for Light - Less than 15,000 lbs. maximum certificated take-off weight

Remember, for ICAO Format, equipment gets its own section (**DGHLORVWXYZ/S**).

And to make it really interesting (some might say mind-boggling).

While the pilots are dealing with the ICAO Format for filing flight plans, believe it or not, the Controllers are still using the Domestic Format when looking at your flight plan strip.

How can this be, you ask?

After your flight plan's RNAV and equipment information is read for RNAV routing assignment, the FAA computers are translating ICAO Format flight plans back into Domestic Format for the Air Traffic Controllers. No, this is not because the FAA likes controllers better than pilots; it's because the software changes necessary in the ATC's antiquated computer systems were determined not to be practical at this time, with the new ERAM computer system coming soon. (For PDC users, please note that your PDC is also translated back into Domestic Format.)

What language are you talking?

When interfacing with a controller on your equipment type (i.e. the controller asks "*what type equipment are you?*"), please remember he's talking Domestic Format, and you'll be talking ICAO Format.

Your options:

- a.) From a practical basis, your best response (if you know) is to just say "*in Domestic Format, I'm a /Q*",
- b.) If you don't know/forgot your Domestic Format letter, just say "*I'm RNAV 1 capable and RVSM certified; do you need any other information.*"
- c.) Or you could be a show off (read: how to torque-off a controller), and say "*in ICAO Format, I'm a DGHLORVWXYZ/S with RNAV capabilities of D1A1E2 and an RNP of 4*".

In Summary.

ICAO Format is here for flying in the U.S.(and has been for 2 years). There is no going back. Once you are familiar with the ICAO Format, you'll probably still like the Domestic Format better. But this is progress.

Other reading: [FltBrief June 2009 Vol.1.](#)